

Abstract

In a video conferencing system, digital data representing pixels of a selected scene are stored in a Video accumulator Array Memory cells (VAM), each cell having memory with several register structures and having the capability of processing the digital data to facilitate compression of the digital data. The VAM has the ability to tell the processor information about the temporal nature of the video data without requiring the processor to first read the data and then test the data. In accordance with the present invention, the capability of processing the video data is designed directly in the memory function as they are stored. The memory array, by providing a capacity of temporal processing wherein the digital data in one video frame can be logically interacted with another video frame later in time, can make a significant reduction in the bandwidth required to transmit a video frame. In a scheme for representing gray scale luminosity, the luminosity is digitally represented by the plus and minus differences from the mid point of the gray scale. A color video camera, in addition to generating color separation pixel values, also generates gray scale luminosity values which include a steady state infrared component provided by steady state illumination of scene in order to reduce the adverse effects of fluorescent lighting.